What is claimed:

1. A purified embryonic or fetal caprine somatic cell.

2. The cell of claim 1, wherein the cell comprises a transgene.

3. The cell of claim 2, wherein the transgene is integrated into the genome of the somatic cell.

4. The cell of claim 2, wherein the transgene is a heterologous transgene.

5. The cell of claim 4, wherein the heterologous transgene includes a human sequence.

6. The cell of claim 2, wherein the transgene is a knockout, knockin or other event which disrupts the expression of a caprine gene.

7. The cell of claim 2, wherein the transgene is under the control of a promoter.

8. The cell of claim 7, wherein the promoter is a tissue-specific promoter.

9. The cell of claim 8, wherein the tissue-specific promoter is a milk-specific promoter.

10. The cell of claim 9, wherein the milk-specific promoter is selected from the group consisting of a β-casein promoter, β-lactoglobin promoter, whey acid protein promoter and lactalbumin promoter.

11. The cell of claim 7, wherein the promoter is a caprine promoter.

12. The cell of claim 2, wherein the transgene encodes a polypeptide selected from the group consisting of a hormone, an immunoglobulin, a plasma protein, and an enzyme.

13. The cell of claim 2, wherein the transgene encodes a polypeptide selected from the group consisting of an α-1 proteinase inhibitor, an alkaline phosphotase, an angiogenin, an extracellular superoxide dismutase, a fibrogen, a glucocerebrosidase, a glutamate decarboxylase, a human serum albumin, a myelin basic protein, a proinsulin, a soluble CD4, a lactoferrin, a lactoglobulin, a lysozyme, a lactoalbumin, an erythrpoietin, a tissue plasminogen activator, a human growth factor, an antithrombin III, an insulin, a prolactin, and an α1-antitrypsin.

14. The cell of claim 1, wherein the cell comprises a heterologous nucleic acid.

15. The cell of claim 14, wherein the nucleic acid is integrated into the genome of the somatic cell.

16. The cell of claim 14, wherein the nucleic acid is a heterologous nucleic acid.

17. The cell of claim 16, wherein the heterologous nucleic acid includes a human sequence.

18. The cell of claim 14, wherein the nucleic acid is a knockout, knockin or other event which disrupts the expression of a caprine gene.

19. The cell of claim 14, wherein the nucleic acid is under the control of a promoter.

20. The cell of claim 19, wherein the promoter is a tissue-specific promoter.

21. The cell of claim 20, wherein the tissue-specific promoter is a milk-specific promoter.

22. The cell of claim 21, wherein the milk-specific promoter is selected from the group consisting of a β-casein promoter, β-lactoglobin promoter, whey acid protein promoter and lactalbumin promoter.

23. The cell of claim 19, wherein the promoter is a caprine promoter.

24. The cell of claim 14, wherein the nucleic acid encodes a polypeptide selected from the group consisting of a hormone, an immunoglobulin, a plasma protein, and an enzyme.

25. The cell of claim 14, wherein the nucleic acid encodes a polypeptide selected from the group consisting of an α-1 proteinase inhibitor, an alkaline phosphotase, an angiogenin, an extracellular superoxide dismutase, a fibrogen, a glucocerebrosidase, a glutamate decarboxylase, a human serum albumin, a myelin basic protein, a proinsulin, a soluble CD4, a lactoferrin, a lactoglobulin, a lysozyme, a lactoalbumin, an erythrpoietin, a tissue plasminogen activator, a human growth factor, an antithrombin III, an insulin, a prolactin, and an α1-antitrypsin.

26. The cell of claim 1, where in the somatic cell is a fibroblast.

27. The cell of claim 26, wherein the fibroblast is a primary fibroblast.

28. The cell of claim 26, wherein the fibroblast is a primary derived fibroblast.

29. The cell of claim 1, wherein the cell is obtained from an embryonic goat derived from a germ cell obtained from a transgenic goat.

30. The cell of claim 29, wherein the germ cell is sperm from a transgenic goat.

31. A purified preparation of an embryonic or fetal caprine somatic cell.

32. The cell of claim 31, wherein the cell comprises a transgene.

33. The cell of claim 32, wherein the transgene is integrated into the genome of the somatic cell.

34. The cell of claim 32, wherein the transgene is a heterologous transgene.

35. The cell of claim 34, wherein the heterologous transgene includes a human sequence.

36. The cell of claim 32, wherein the transgene is a knockout, knockin or other event which disrupts the expression of a caprine gene.

37. The cell of claim 32, wherein the transgene is under the control of a promoter.

38. The cell of claim 37, wherein the promoter is a tissue-specific promoter.

39. The cell of claim 38, wherein the tissue-specific promoter is a milk-specific promoter.

40. The cell of claim 39, wherein the milk-specific promoter is selected from the group consisting of a β-casein promoter, β-lactoglobin promoter, whey acid protein promoter and lactalbumin promoter.

41. The cell of claim 37, wherein the promoter is a caprine promoter.

42. The cell of claim 32, wherein the transgene encodes a polypeptide selected from the group consisting of a hormone, an immunoglobulin, a plasma protein, and an enzyme.

43. The cell of claim 32, wherein the transgene encodes a polypeptide selected from the group consisting of an α-1 proteinase inhibitor, an alkaline phosphotase, an angiogenin, an extracellular superoxide dismutase, a fibrogen, a glucocerebrosidase, a glutamate decarboxylase, a human serum albumin, a myelin basic protein, a proinsulin, a soluble CD4, a lactoferrin, a lactoglobulin, a lysozyme, a lactoalbumin, an erythrpoietin, a tissue plasminogen activator, a human growth factor, an antithrombin III, an insulin, a prolactin, and an α1-antitrypsin.

44. The cell of claim 31, wherein the cell comprises a heterologous nucleic acid.

45. The cell of claim 44, wherein the nucleic acid is integrated into the genome of the somatic cell.

46. The cell of claim 44, wherein the nucleic acid is a heterologous nucleic acid.

47. The cell of claim 46, wherein the heterologous nucleic acid includes a human sequence.

48. The cell of claim 44, wherein the nucleic acid is a knockout, knockin or other event which disrupts the expression of a caprine gene.

49. The cell of claim 44, wherein the nucleic acid is under the control of a promoter.

50. The cell of claim 49, wherein the promoter is a tissue-specific promoter.

51. The cell of claim 50, wherein the tissue-specific promoter is a milk-specific promoter.

52. The cell of claim 51, wherein the milk-specific promoter is selected from the group consisting of a β-casein promoter, β-lactoglobin promoter, whey acid protein promoter and lactalbumin promoter.

53. The cell of claim 49, wherein the promoter is a caprine promoter.

54. The cell of claim 44, wherein the nucleic acid encodes a polypeptide selected from the group consisting of a hormone, an immunoglobulin, a plasma protein, and an enzyme.

55. The cell of claim 44, wherein the nucleic acid encodes a polypeptide selected from the group consisting of an α-1 proteinase inhibitor, an alkaline phosphotase, an angiogenin, an extracellular superoxide dismutase, a fibrogen, a glucocerebrosidase, a glutamate decarboxylase, a human serum albumin, a myelin basic protein, a proinsulin, a soluble CD4, a lactoferrin, a lactoglobulin, a lysozyme, a lactoalbumin, an erythrpoietin, a tissue plasminogen activator, a human growth factor, an antithrombin III, an insulin, a prolactin, and an α1-antitrypsin.

56. The cell of claim 31, where in the somatic cell is a fibroblast.

57. The cell of claim 56, wherein the fibroblast is a primary fibroblast.

58. The cell of claim 56, wherein the fibroblast is a primary derived fibroblast.

59. The cell of claim 31, wherein the cell is obtained from an embryonic goat derived from a germ cell obtained from a transgenic goat.

60. The cell of claim 59, wherein the germ cell is sperm from a transgenic goat.

61. A method of preparing an embryonic or fetal caprine somatic cell line, comprising:

a) obtaining a somatic cell from an embryonic or fetal goat; and,

b) culturing the cell in a suitable medium,

such that a somatic cell line is obtained.

62. The method of claim 61, wherein the cell line is a genetically engineered cell line.

63. The method of claim 62, wherein the cell comprises a transgene integrated into its genome.

64. The method of claim 63, wherein the transgene is a heterologous transgene.

65. The method of claim 64, wherein the heterologous transgene includes a human sequence.

66. The method of claim 63, wherein the transgene is a knockout, knockin or other event which disrupts the expression of a caprine gene.

67. The method of claim 63, wherein the transgene is under the control of a promoter.

68. The method of claim 67, wherein the promoter is a tissue-specific promoter.

69. The method of claim 68, wherein the tissue-specific promoter is a milk-specific promoter.

70. The method of claim 69, wherein the milk-specific promoter is selected from the group consisting of a β-casein promoter, β-lactoglobin promoter, whey acid protein promoter and lactalbumin promoter.

71. The method of claim 67, wherein the promoter is a caprine promoter.

72. The method of claim 63, wherein the transgene encodes a polypeptide selected from the group consisting of a hormone, an immunoglobulin, a plasma protein, and an enzyme.

73. The method of claim 63, wherein the transgene encodes a polypeptide selected from the group consisting of an α-1 proteinase inhibitor, an alkaline phosphotase, an angiogenin, an extracellular superoxide dismutase, a fibrogen, a glucocerebrosidase, a glutamate decarboxylase, a human serum albumin, a myelin basic protein, a proinsulin, a soluble CD4, a lactoferrin, a lactoglobulin, a lysozyme, a lactoalbumin, an erythrpoietin, a tissue plasminogen activator, a human growth factor, an antithrombin III, an insulin, a prolactin, and an α1-antitrypsin.

74. The method of claim 62, wherein the cell comprises a heterologous nucleic acid.

75. The method of claim 74, wherein the nucleic acid is integrated into the genome of the somatic cell.

76. The method of claim 74, wherein the nucleic acid is a heterologous nucleic acid.

77. The method of claim 76, wherein the heterologous nucleic acid includes a human sequence.

78. The method of claim 74, wherein the nucleic acid is a knockout, knockin or other event which disrupts the expression of a caprine gene.

79. The method of claim 74, wherein the nucleic acid is under the control of a promoter.

80. The method of claim 79, wherein the promoter is a tissue-specific promoter.

81. The method of claim 80, wherein the tissue-specific promoter is a milk-specific promoter.

82. The method of claim 81, wherein the milk-specific promoter is selected from the group consisting of a β-casein promoter, β-lactoglobin promoter, whey acid protein promoter and lactalbumin promoter.

83. The method of claim 79, wherein the promoter is a caprine promoter.

84. The method of claim 74, wherein the nucleic acid encodes a polypeptide selected from the group consisting of a hormone, an immunoglobulin, a plasma protein, and an enzyme.

85. The method of claim 74, wherein the nucleic acid encodes a polypeptide selected from the group consisting of an α-1 proteinase inhibitor, an alkaline phosphotase, an angiogenin, an extracellular superoxide dismutase, a fibrogen, a glucocerebrosidase, a glutamate decarboxylase, a human serum albumin, a myelin basic protein, a proinsulin, a soluble CD4, a lactoferrin, a lactoglobulin, a lysozyme, a lactoalbumin, an erythrpoietin, a tissue plasminogen activator, a human growth factor, an antithrombin III, an insulin, a prolactin, and an α1-antitrypsin.

86. The method of claim 61, wherein the somatic cell is a fibroblast.

87. The method of claim 86, wherein the fibroblast is a primary fibroblast.

88. The method of claim 86, wherein the fibroblast is a primary derived fibroblast.

89. The method of claim 61, wherein the cell is obtained from an embryonic or fetal goat derived from a germ cell obtained from a transgenic goat.

90. The method of claim 89, wherein the germ cell is sperm from a transgenic goat.

91. A method of preparing a genetically engineered cell line, comprising:

a) inseminating a female recipient with the semen from a transgenic non-human animal;

b) obtaining a transgenic non-human embryo from the recipient;

c) obtaining a somatic cell from a the embryo; and,

d) culturing the cell in a suitable medium,

such that a somatic cell line is obtained.